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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/003,852 | 12/06/2001 | Timothy S. Sherwood | 033018-031 | 7465 |

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EXAMINER

PAIK, SANG YEOP

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3742

11

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,852

Applicant(s)

SHERWOOD ET AL

Examiner

Sang Y Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4 and 8 is/are allowed.
- 6) ☒ Claim(s) 1,5-7 and 9-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5-7, 17-20, 23, 25, 26, 28-32, 35, 37-39, 42 and 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi (US 6,155,268) in view of Eastman (US 4,212,347).

Takeuchi discloses the aerosol generator claimed including the laminate body having the fluid passage, the electric resistance heater plates along the fluid passage, a fluid supply, the laminated layers being sealed with the material such as a plastic film or a metal, the capillary size having the width of 0.01 mm to 2.0 mm (also see Figures 10 and 11; and column 9, line 35-column 10, line 27). However, Takeuchi does not show the opposed layers of the laminated body are bonded together.

Eastman shows a laminated body having a fluid passage therein whose opposed layers are bonded together. In view of Eastman, it would have been obvious to one of ordinary skill in the art to adapt Takeuchi with the laminated body whose opposed layers are bonded together to improve a tight seal between the laminated body. With respect to claims 5 and 6, it would have been obvious to one of ordinary skill in the art to bond the laminated layer by the means of adhesive or metallurgy since Eastman leaves it to one of ordinary skill in the art to use any conventional means to bond the laminated layers.

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With respect to claims 25, 37 and 44, Takeuchi shows the heater plates having its entire surface less than the size of the laminate. While Takeuchi does not show that the width of the heater is not less than the width of the laminate, it would have been obvious to one of ordinary skill in the art to provide the width of the heater smaller than the width of the laminate to control the heating capacity of the heater to meet the desired heating rate or heating surface as one would desire to achieve.

3. Claims 9, 21, 22, 24, 33, 34, 36, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi in view of Eastman as applied to claims 1, 5-7, 17-20, 23, 25, 26, 28-32, 35, 37-39, 42 and 44-47 above, and further in view of Howell et al (US 5,743,251).

Takeuchi in view of Eastman Takeuchi discloses the aerosol generator claimed except the heater comprising a layer of platinum.

Howell et al shows an aerosol generator having a ceramic capillary tube with a layer of platinum as the heater, and it teaches that the platinum layer does not experience oxidation degradation or other corrosion. In view of Howell et al, it would have been obvious to one of ordinary skill in the art to adapt Takeuchi, as modified by Eastman, with the laminated body made of ceramic with a heater layer made of platinum to provide good resistance to oxidation degradation and corrosion to improve the life of the aerosol generator.

Howell et al further disclose that the aerosol generator is provided with a valve and a pump having a piston therein. It would have been obvious to one of ordinary skill in the art to further adapt Takeuchi with the valve and the pump to control amount of the fluid transfer from the source container to the fluid passage.

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4. Claims 10-16, 27 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi in view of Eastman Takeuchi as applied to claims 1, 5-7, 17-20, 23, 25, 26, 28-32, 35, 37-39, 42 and 44-47 above, and further in view of Obeshaw (US 6,586,110).

Takeuchi in view of Eastman Takeuchi disclose the aerosol generator claimed except having a mandrel between the opposed layers of the laminate body.

Obeshaw shows a method of making a contoured metal structure having a removable mandrel disposed between the laminate body to form a desire shape or defining the space. Figure 3 further shows a variety of shapes and figures one can make.

In view of Obeshaw, it would have been obvious to one of ordinary skill in the art to adapt Takeuchi, as modified by Eastman Takeuchi, with a removable mandrel to form a desired shapes and forms to meet the need of the user.

With respect to claims 14 and 16, it would have been obvious to one of ordinary skill in the art to provide the electrical contacts to the heaters to supply the power and to generate the necessary heat.

Allowable Subject Matter

5. Claims 2, 3, 4 and 8 are allowed over the prior art of record.

Response to Arguments

6. Applicant's arguments with respect to claims 1-48 have been considered but are moot in view of the new ground(s) of rejection.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 703-308-1147. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dick Bertsch can be reached on 703-308-0975. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

S. Paik

Sang Y Paik
Primary Examiner
Art Unit 3742

syp
August 8, 2003